

IN THE CLAIMS

The following is a complete set of the claims, and replaces all earlier versions and claim sets.

1. (Currently Amended) An image forming apparatus for outputting an image based on inputted image data, said apparatus comprising:

reading means for reading an image and generating image data;

creation means for creating a correction table for correcting the density characteristics of the image data;

correction means for correcting the density characteristics of the image data from said reading means, based on the correction table created by said creation means; and

output means for outputting an image based on the image data corrected by said correction means;

wherein said creation means creates the correction table based on a train of data generated by said reading means by reading plural gradient patterns outputted by said output means, and the plural gradient patterns outputted by said output means are disposed in point symmetry with respect to a center position of the image, and

wherein the correction table for correcting the image data read by the reading means is created by performing a smoothing process using some pieces of data whose number changes depending on the position of data in the generated train of data.

2. (Previously Presented) The image forming apparatus according to claim 1, wherein the gradient pattern is composed of a plurality of density patches.

3. (Previously Presented) The image forming apparatus according to claim 1, wherein said creation means determines the train of data based on an average value of the plural brightness data obtained by the plural gradient patterns and applies an interpolating process and the smoothing process to the train of data, thereby to create the correction table.

4. - 16. (Cancelled)

17. (Previously Presented) An image forming method for outputting an image based on inputted image data, said method comprising the steps of:

reading an image and generating image data;

creating a correction table for correcting the density characteristics of the image data;

correcting the density characteristics of the image data from said reading step, based on the correction table created in said creating step; and

outputting an image based on the image data corrected in said correcting step,

wherein, in said creating step, the correction table is created based on a train of data generated in said reading step by reading plural gradient patterns outputted in said outputting step, and the plural gradient patterns outputted in said outputting step are disposed in point symmetry with respect to a center position of the image, and

wherein the correction table is created by performing a smoothing process using some pieces of data whose number changes depending on the position of data in the generated train of data.

18. (Previously Presented) The image forming method according to claim 17, wherein the gradient pattern is composed of a plurality of density patches.

19. (Previously Presented) The image forming method according to claim 17, wherein, in said creating step, the train of data is determined based on an average value of the plural brightness data obtained by the plural gradient patterns and there are applied an interpolating process and the smoothing process to the train of data, thereby to create the correction table.

20. (Previously Presented) A computer program which causes a computer to execute the steps of:

reading an image and generating image data;

creating a correction table for correcting the density characteristics of the image data;

correcting the density characteristics of the image data from said reading step, based on the correction table created by said creating step; and

outputting an image based on the image data corrected by said correcting step,

wherein, in said creating step, the correction table is created based on a train of data generated in said reading step by reading plural gradient patterns outputted in said outputting step, and the plural gradient patterns outputted in said outputting step are disposed in point symmetry with respect to a center position of the image, and

wherein the correction table is created by performing a smoothing process using some pieces of data whose number changes depending on the position of data in the generated train of data.

21. (Previously Presented) The image forming method according to claim 20, wherein the gradient pattern is composed of a plurality of density patches.

22. (Previously Presented) The computer program according to claim 20, wherein, in said creating step the train of data is determined based on an average value of the plural brightness data obtained by the plural gradient patterns and there are applied an interpolating process and the smoothing process to the train of data, thereby to create the correction table.